

(11) **EP 1 513 356 A3**

(12)

EUROPEAN PATENT APPLICATION

(88) Date of publication A3: **06.06.2007 Bulletin 2007/23**

(51) Int Cl.: H04Q 7/22^(2006.01)

H04L 1/00 (2006.01)

(43) Date of publication A2: 09.03.2005 Bulletin 2005/10

(21) Application number: 04255309.9

(22) Date of filing: 02.09.2004

(84) Designated Contracting States:

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PL PT RO SE SI SK TR Designated Extension States:

AL HR LT LV MK

(30) Priority: 02.09.2003 JP 2003309660

(71) Applicant: Sony Ericsson Mobile Communications Japan, Inc. Tokyo (JP)

(72) Inventor: Itoh, Katsutoshi, c/o Sony Ericsson Mobile Minato-ku Tokyo (JP)

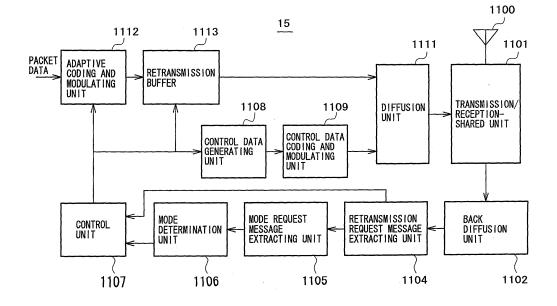
(74) Representative: Turner, James Arthur et al D Young & Co 120 Holborn London EC1N 2DY (GB)

(54) Radio communication system and radio communication device

(57) In the mobile terminal, the reception quality estimating unit measures a reception quality, and at least one of the data buffer monitoring unit and the transmission power monitoring unit measures a data transmission capability. Based on the measured reception quality and data transmission capability, the terminal determines a transmission mode to be used, and reports it to the base station. The base station determines the transmission

mode to be practically used in accordance with the reported transmission mode, and notifies it to the mobile terminal. The base station transmits data according to the determined transmission mode, and the mobile terminal receives data according to the notified transmission mode. Thereby, the radio communication system determines the transmission mode in consideration for not only the reception quality, but also the deficiency in the data transmission capability of the terminal.

F I G. 2



EP 1 513 356 A:



EUROPEAN SEARCH REPORT

Application Number EP 04 25 5309

		ERED TO BE RELEVANT	Delever	OL ADDIELO ATION OF THE	
Category	Citation of document with ii of relevant pass	ndication, where appropriate, ages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)	
X	ENGELS VOLKER [DE]; PETRAS) 24 October * abstract; claim 2 * page 16, line 13 * page 17, line 12	2; figures 2,5 *	1,4,5,	INV. H04Q7/22 H04L1/00	
Y	*Idem*		2,3,6-9 12-15	,	
Y		3; figure 7 * - line 14 *	2,3,6-9 12-15	,	
P,X	EP 1 437 912 A (SAN [KR]) 14 July 2004 * abstract; figures * page 2, line 34 - * page 12, line 10	s 4,10 * - line 37 *	1,2	TECHNICAL FIELDS SEARCHED (IPC)	
A	[US]; KREBS LAWRENC [US) 27 March 2003	2; figures 2,3,7,8 *	1-15	H04L H04B	
A	20 November 2002 (2 * abstract; figures		1-15		
A	US 2002/176482 A1 (28 November 2002 (2 * abstract; figures * page 4, paragraph	5 1,2 *	1-15		
	The present search report has	been drawn up for all claims	-		
	Place of search	Date of completion of the search		Examiner	
	Berlin	30 April 2007	Da	nielidis, Simon	
CATEGORY OF CITED DOCUMENTS T: theory or princi E: earlier patent c after the filling c Y: particularly relevant if taken alone Y: particularly relevant if combined with another document of the same category L: document oitec			e underlying the sument, but pub e n the application or other reasons	invention lished on, or	
O : non	nological background written disclosure mediate document	& : member of the sa document		ly, corresponding	

EPO FORM 1503 03.82 (P04C01)

ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO.

EP 04 25 5309

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

30-04-2007

Patent document cited in search report		Publication date				Publication date	
WO	02084930	A	24-10-2002	CA CN DE EP EP JP US	2442846 1515094 10118100 1380130 1677448 2004536489 2004213174	A A1 A2 A2 T	24-10-200 21-07-200 24-10-200 14-01-200 05-07-200 02-12-200 28-10-200
WO	0191322	Α	29-11-2001	AU SE	4703701 0001918		03-12-200 24-11-200
EP	1437912	Α	14-07-2004	CN JP US	1521956 2004215276 2004198369	Α	18-08-200 29-07-200 07-10-200
WO	03026189	Α	27-03-2003	NONE			
EP	1259015	A2	20-11-2002	CN DE JP KR US	1387328 60213030 2003037554 20020089152 2002173312	T2 A A	25-12-200 08-02-200 07-02-200 29-11-200 21-11-200
US	2002176482	A1	28-11-2002	EP JP WO	1329068 2004531913 0243341	T	23-07-200 14-10-200 30-05-200

FORM P0459

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82